



Buildings for the 21st Century

Buildings that are more energy-efficient, comfortable, and affordable...that's the goal of DOE's Office of Building Technology, State and Community Programs (BTS). To accelerate the development and wide application of energy efficiency measures, BTS:

- Conducts R&D on technologies and concepts for energy efficiency, working closely with the building industry and with manufacturers of materials, equipment, and appliances
- Promotes energy/money saving opportunities to both builders and buyers of homes and commercial buildings
- Works with State and local regulatory groups to improve building codes, appliance standards, and guidelines for efficient energy use
- Provides support and grants to States and communities for deployment of energy-efficient technologies and practices



BUILDING ENERGY CODES



HELPING IMPROVE ENERGY EFFICIENCY IN THE NATION'S BUILDINGS

The U.S. Department of Energy (DOE) is committed to promoting energy efficiency in the nation's buildings. Energy-efficient buildings improve the lives of Americans by saving consumers money, lessening our demand for fossil fuels, decreasing the need for new power generation, and reducing pollution.

DOE's Office of Building Technology, State and Community Programs established the Building Energy Codes (BEC) Program to advance and advocate energy-efficient and environmentally sound buildings throughout the nation. The program works with other government agencies, state and local jurisdictions, national code organizations, and industry to promote the adoption and implementation of energy codes for residential and commercial buildings in the public and private sectors.

The program is involved in five major areas to help improve the energy efficiency of residential and commercial buildings:

- ✓ Help develop improved national model energy codes.
- ✓ Develop and distribute easy-to-use compliance tools and materials.
- ✓ Provide financial and technical assistance to help states adopt, implement, and enforce building energy codes.
- ✓ Collaborate with stakeholders to address industry needs and provide information on compliance products and training and energy code-related news.
- ✓ Help DOE develop and promulgate improved Federal building energy codes.



How do consumers benefit from DOE's program?

Consumers are benefiting from the program's efforts to help improve energy efficiency in the Nation's buildings. The Building Energy Codes Program assistance has resulted in improved energy efficiency of almost 3 billion square feet of new commercial floor space and 4 million new homes. The cumulative energy cost savings is estimated to be over \$4.2 billion as of 2001-enough to provide all of the energy requirements for over 3 million homes for a year.

Taxpayers have benefited as well! DOE's \$37.5 million investment in BEC has resulted in annual energy savings of nearly \$1 billion. Every \$1 spent on the program has yielded more than \$105 in annual energy savings.



How is the program involved in energy code development?

The program works with the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE), the International Code Council (ICC), states, and various code user groups to develop more stringent and easier-to-understand energy codes. These groups are working to identify upcoming and recently available energy efficiency technologies and practices and to remove impediments to these technologies in the national model energy codes and standards.

The program assisted in the development of ASHRAE/IESNA Standard 90.1-1999 and is currently involved in future modifications to the standard. Standard 90.1-1999 represents the most significant new commercial building energy standard in a decade. It contains minimum energy efficiency requirements for all aspects of new and existing commercial

For more information about the DOE Office of Building Technology, State and Community Programs, contact:

Energy Efficiency and Renewable Energy Clearinghouse (EREC)
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Codes and Standards Home Page:

www.energycodes.gov

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The Model Energy Code can be obtained from the International Code Council at 703-931-4533 or ASHRAE Customer Service at 404-636-8600.

COMcheck-EZ™, COMcheck-Plus™, and MECcheck™ can be obtained by calling the Energy Codes Hotline **1-800-270-CODE** or download directly from the website at www.energycodes.gov

Energy Codes Hotline:
1-800-270-CODE (2633)



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and high-rise residential buildings. Standard 90.1-1999 is now the reference standard for commercial buildings in the International Energy Conservation Code (IECC) 2001. 1992 EPAAct requirements referenced 90.1-89. If DOE issues a positive Determination, it will reference 90.1-1999.

The program has been involved in developing proposals for all editions of the IECC and its predecessor the MEC. These codes contain energy efficiency criteria for new residential and commercial buildings and additions to existing buildings. The Program is also helping develop residential and commercial codes for Federal Buildings. We are currently working on proposals for the 2003 edition of the IECC.



What code compliance materials are available?

The program has developed and currently distributes support materials, tools, and software to make code compliance easier for designers, builders, code officials, and others. The **MECcheck™**, **COMcheck-EZ™**, and **COMcheck-Plus™** compliance products include software, user's guides, videos, training materials, and compliance manuals to help streamline compliance with the IECC and Standard 90.1.

Between 1994 and 2001, the program has distributed more than 91,000 copies of the compliance software. **MECcheck™**, one of BEC's most successful products, has won several awards (Federal Laboratory Consortium and Energy 100) within the Federal government. It has also won an award from the National Conference of States on Building Codes and Standards (NCSBCS) for making regulations useable by emphasizing the importance of regulatory streamlining through the development of a suite of code compliance tools.



How is the program helping States implement energy codes?

Program staff coordinate with industry groups, stakeholders, and state and local jurisdictions through outreach activities, training, technical assistance, and conferences to help States implement building energy codes.

Outreach Activities – Through the program's website, stakeholders can get free information on compliance products and training, and can download publications, the compliance software, and training materials. The program publishes the *Setting the Standard* newsletter that contains energy code-related news. Building professionals call the Energy Codes Hotline for technical assistance and information.

Training – The program provides training and training materials on **MECcheck™**, **COMcheck-EZ™**, **COMcheck-Plus™**, and the national model energy codes. Training is available via traditional classroom presentation as well as on video and CD. Between 1995 and 2001, the Building Energy Codes Program provided training and/or training materials and support to over 30,000 building professionals and code officials in 41 states.

Technical Assistance to States –

The program provides technical assistance to help states and local jurisdictions adopt, implement, and enforce building energy codes. The program helps states modify national model energy codes to meet state needs and develop state-specific code compliance software and training materials. Program staff provide code compliance training within states, and analyze the energy and economic impact of state and local building codes.

Special Projects Grants – The DOE State Energy Program (SEP) provides direct funding to states through Special Projects grants. States use the money to train building professionals, to evaluate and study current construction practices, to develop new or enhance existing state energy codes, and to support state energy offices in their efforts to adopt, implement, and enforce building energy codes. Since 1995, DOE has provided states with \$28M in incentive grants.

Buildings-Related Conferences –

Program staff attend stakeholder conferences including NAHB, AIA, and the DOE-sponsored annual National Workshop on State Building Energy Codes. The National Workshop is also sponsored, developed and implemented by the Building Energy Codes program. Participation in these conferences provide increased awareness of DOE code activities among code users and an opportunity to demonstrate, discuss, and distribute compliance tools and materials.



How can I get more information on the program's products and services?

Call the Energy Codes Hotline at **1-800-270-CODE (2633)** or visit the website at www.energycodes.gov to learn more about the program's products and services, get the latest edition of the *Setting the Standard* newsletter, or download the compliance software and training materials.